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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
FETZNER, TIFFANY A	

ART UNIT	PAPER NUMBER
2859	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/065,848	LASKARIS ET AL.	
	Examiner	Art Unit	
	Tiffany A Fetzner	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/21/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED Final ACTION

Response to Arguments

1. Applicant's arguments with respect to **claims 1-23** have been considered but are moot in view of the new ground(s) of rejection necessitated by applicant's October 21st 2004 amendment and response. The earlier art rejections from the July 16th 2004 office action are **rescinded.**

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 2, 13** and **16** are **finally rejected** under **35 U.S.C. 102(b)** as being anticipated by **Chari et al.**, US patent 5,307,039 issued April 26th 1994.

4. With respect to **Amended Claim 1**, **Chari et al.**, teaches and shows "An open magnetic resonance imaging (MRI) device" [See abstract, figures 1-4, col. 1 lines 65 through col. 4 line 39] **Chari et al.**, teaches and shows, that the device comprises "~~at least one~~ **a** main coil" (i.e. main super conducting magnet 10 comprised of five coil components 24 through 28 of figures 2, 3, and 4; therefore a main magnet coil is disclosed by the **Chari et al.**, reference), "for generating a magnetic field for imaging a volume" [See col. 1 lines 65 through col. 4 line 39; and imaging volume 29 of figures 2, 3, and 4.] **Chari et al.**, also teaches and shows "~~at least one~~ **a plurality of** shaping coil**s**", (i.e. the components 24 through 28 which comprise main magnet coil 10 and are specifically designed to control the shape of the magnetic field produced by magnet 10). Additionally, Figures 2 through 4 show that the coil components 24 through 28 which comprise main magnet 10 are "~~being~~ positioned radially inside ~~relative to~~ said ~~at least one~~ main coil" (i.e. inside component 10) "**and axially further from said volume**" (i.e. component 29 of figures 2 through 4) "**than said main coil"** housing component 12

which defines the imaging bore 14, "**or in a plane of said main coil**" [See figures 2 through 4 col. 1 lines 65 through col. 4 line 39].

5. With respect to **Amended Claim 2, Chari et al.**, teaches and shows "a single unit support structure" [See Figures 2, 3, 4 and casing component 12; col. 2 lines 44-63] "wherein said ~~at least one~~ main coil" (i.e. super conducting magnet 10 of figures 2, 3, 4) "is positioned on" (i.e. "defined by") "an outer surface of said single unit support structure", (i.e. housing/casing 12) {See figures 2, 3, 4] "and wherein ~~said~~ at least one **of said** shaping coil**s**" (i.e. coil components 24 through 28) "is positioned on an inner surface of said single unit support structure", (i.e. within magnet 10's housing / casing 12) {See figures 2, 3, 4. The same reasons for rejection, that apply to **claim 1** also apply to **claim 2** and need not be reiterated.

6. With respect to **Claim 13**, the **Chari et al.**, reference teaches that "said at least one shaping coil shapes said magnetic field in said volume to a uniformity of at least 10 ppm." [See col. 3 lines 51 through col. 4 line 16; especially col. 3 lines 58-61 and col. 4 lines 12-16 where a ppm homogeneity uniformity of 41ppm and 26.8ppm are each "at least 10 ppm."] The same reasons for rejection, that apply to **claim 1** also apply to **claim 13** and need not be reiterated.

7. With respect to **Claim 16**, the **Chari et al.**, reference shows from figure 2 "a plurality of shaping coils", (i.e. coil components 24 through 28) the **Chari et al.**, reference teaches "at least one of said plurality of shaping coils having a magnetic polarity opposite to a magnetic polarity of another of said plurality of shaping coils." [See shaping coil component 27 of figures 2, 3, 4 which is opposite to the coil components 24, 25, 26, and 28. See also the teachings of col. 3 lines 55-61, col. 4 lines 9-16]. The same reasons for rejection, that apply to **claims 1, 2,** also apply to **claim 16** and need not be reiterated.

8. **Claims 1-12** and **14-23** are **finally** rejected under **35 U.S.C. 102(b)** as being anticipated by **Bryne et al.,** US patent 6,211,676 B1 issued April 3rd 2001.

9. With respect to **Amended Claim 1, Bryne et al.,** teaches and shows "An open magnetic resonance imaging (MRI) device" [See abstract, figure 1]. **Bryne et al.,** teaches and shows, that the device comprises "~~at least one~~ **a** main coil" (i.e. main

driving coils 1a and 2a shown in figures 1 and 2), "for generating a magnetic field for imaging a volume" [See col. 3 lines 7-42; and imaging volume 3 of figures 1 and 2.] **Bryne et al.,** also teaches and shows "~~at least one~~ **a plurality of** shaping coil**s**", (i.e. the components identified as shielding coils 5 are also homogeneity shaping coils as per the teachings of col. 2 line 39 through col. 3 line 6; and col. 3 lines 14-53.) Additionally, Figures 1 and 2 show that the coil components 5 which comprise the shielding/shaping means for constraining the magnetic field, "~~being~~ positioned radially inside ~~relative to~~ said ~~at least one~~ main coil" (i.e. within and behind / above / below or beyond the driving main coils 1a, 2a, depending upon which coil 5 is being referenced.) The examiner notes that in the **Bryne et al.,** reference **each of the** shielding/shaping coils 5 are also located "**axially further from said volume**" (i.e. component 2 of figures 1 and 2 "**than said main coil"** components 1a, and 2a of figures 1 and 2, "**or in a plane of said main coil**" [See figures 1 and 2 col. 2 line 30 through col. 4 line 53].

10. With respect to **Claim 2**, **Bryne et al.,** teaches and shows "a single unit support structure" [See Figure 2 the single "C" shaped magnet] "wherein said at least one main coil" (i.e. components 1a, 2a,) "is positioned on an outer surface of said single unit support structure", [See figure 2] "and wherein said at least one shaping coil" (i.e. the shielding/shaping component 5) "is positioned on an inner surface of said single unit support structure". [See figures 1, and 2 where components 5 define inner surfaces of the main "C" shaped support structure. (i.e. inside / within or behind / above / below or beyond the driving main coils 1a, 2a, depending upon which coil 5 is being referenced.) }. The same reasons for rejection, that apply to **claim 1** also apply to **claim 2** and need not be reiterated.

11. With respect to **Claim 3**, **Bryne et al.,** teaches and shows that "said single unit support structure comprises: a substantially" C-shaped "cylindrical shell;" [See figures 1 and 2 where the horizontal / longitudinal distance of component 4c mirror-symmetrically in figure 1; and the horizontal length of components 1a and 2a in figure 2, define a substantially cylindrically shaped area about the imaging volume 3.] **Bryne et al.,** also show "a hub positioned along a substantially central axis of said cylindrical shell" [See figures 1 and 2, because the horizontal / longitudinal distance of component 4c mirror-

symmetrically in figure 1; and the horizontal length of components 1a and 2a in figure 2 also define the main "hub" of the open MRI system which supports a patient to be imaged within the imaging volume 3].

12. **Bryne et al.,** figure 1 also shows "a plurality of gussets" (i.e. the trapezoidal, triangular, and angled support components which are not numerically numbered but are shown securing / holding / retaining the shielding/shaping coils 5 at there respective appropriate locations). The examiner notes that because gussets are clearly shown in figure1, the presence of a "plurality of gussets positioned within said cylindrical shell" is provided by the illustration of figure 1 itself. Also while the term "gusset" is not explicitly recited by the text, a plurality of unlabeled "gussets" are still illustrated in figure 1 and therefore are an intrinsic structural component within the **Bryne et al.,** reference. Additionally, figure 1 shows "each of said gussets" (i.e. the trapezoidal, triangular, and angled support components which are not numerically numbered but are shown securing / holding / retaining the shielding/shaping coils 5 at there respective appropriate locations), "extending radially outward from said hub" [See figure 1]. The same reasons for rejection, that apply to **claims 1, 2** also apply to **claim 3** and need not be reiterated.

13. With respect to **Claim 4**, **Bryne et al.,** shows that "at least one support post positioned between a first half and a second half of said cylindrical shell." [See figure 1]. The same reasons for rejection, that apply to **claims 1, 2, 3** also apply to **claim 4** and need not be reiterated.

14. With respect to **Claim 5**, **Bryne et al.,** shows that "at least one support post is attached on one end to a flange formed on the first half of said cylindrical shell and attached on an opposite end to a flange formed on the second half of said cylindrical shell". {See figures 1, and 2]. The same reasons for rejection, that apply to **claims 1, 2, 3, 4** also apply to **claim 5** and need not be reiterated.

15. With respect to **Claim 6**, **Bryne et al.,** teaches that "at least one of: said cylindrical shell, said hub, and said gussets comprise one of stainless steel, aluminum, and fiber-reinforced composites." [See col. 2 lines 3-9; especially col. 2 lines 8-9]. The

same reasons for rejection, that apply to **claims 1, 2, 3** also apply to **claim 6** and need not be reiterated.

16. With respect to **Claim 7**, **Bryne et al.,** teaches and shows "at least one ferromagnetic ring positioned on an outer surface of said single unit support structure." [See figure 2 components 1b, 1c, 2b, and 2c col. 3 lines 7-23] The same reasons for rejection, that apply to **claims 1, 2** also apply to **claim 7** and need not be reiterated.

17. With respect to **Claim 8**, **Bryne et al.,** teaches and shows "at least one ferromagnetic ring" [See figure 2 components 1b, 1c, 2b, and 2c] "is positioned" [See figure 2] "substantially between coils having opposite" (i.e. reversed) "current directions" [See col. 4 lines 24-43; col. 3 lines 7-23]. The same reasons for rejection, that apply to **claims 1, 2, 7** also apply to **claim 8** and need not be reiterated.

18. With respect to **Claim 9**, the **Bryne et al.,** reference directly shows from figure 2 that "said MRI device comprises at least four ferromagnetic rings", because figure 2 shows at least eight ferromagnetic rings, (i.e. Iron is a ferromagnetic material). [See components 1b, 1c, 2b, and 2c]. The same reasons for rejection, that apply to **claims 1, 2, 7** also apply to **claim 9** and need not be reiterated.

19. With respect to **Claim 10**, the **Bryne et al.,** reference directly suggests at least one bucking coil" [See figure 1 components 1e, 1f, 2e, and 2f; col. 3 lines 7-42 where the examiner is interpreting coils 1e, 1f, 2e, and 2f; to be bucking coils because they serve as an additional means of compensating for and controlling stray magnetic field lines increasing magnetic homogeneity], "positioned on an outer surface of said single unit support structure for shielding the magnetic field." [See col. 3 lines 7-42]. The same reasons for rejection, that apply to **claims 1, 2,** also apply to **claim 10** and need not be reiterated.

20. With respect to **Claim 11**, the **Bryne et al.,** reference directly suggests "at least two bucking coils". [See figure 1 components 1e, 1f, 2e, and 2f which are broadly interpreted as "bucking coils" based upon their function by the examiner and the teachings of col. 3 lines 7-42, because more than one coil component 1e, 1f, 2e, and 2f are shown in figure 1]. The same reasons for rejection, that apply to **claims 1, 2, 10** also apply to **claim 11** and need not be reiterated.

21. With respect to **Claim 12**, the **Bryne et al.,** reference shows via figures 1 and 2, that there are "at least eight shaping coils" [See figures 1 and 2 where eight components identified by the component number 5 are shown. See also the teachings of col. 2 line 39 through col. 3 line 6]. The same reasons for rejection, that apply to **claim 1,** also apply to **claim 12** and need not be reiterated.

22. With respect to **Claim 14**, the **Bryne et al.,** reference shows from figure 2 shim shaping coil component 43, "an even number of shaping coils" [See figure 2]. The same reasons for rejection, that apply to **claim 1,** also apply to **claim 14** and need not be reiterated.

23. With respect to **Claim 15**, the **Bryne et al.,** reference teaches and shows from figures 1, 2 that "a first half of the number of shaping coils have a first magnetic polarity and a second half of the number of shaping coils have a second magnetic polarity substantially opposite that of said first magnetic polarity", because poles 1 and 2 are taught to be of opposite polarity, therefore half of the shielding components 5, which shield main coils by constraining/opposing the current of the driving coils have a first polarity and the other half have the opposite polarity. [See col. 2 line 30 through col. 3 line 6] The same reasons for rejection, that apply to **claims 1, 14,** also apply to **claim 15** and need not be reiterated.

24. With respect to **Claim 16**, the **Bryne et al.,** reference shows from figures 1 and 2 "a plurality of shaping coils", (i.e. shielding / shaping components 5) with "at least one of said plurality of shaping coils having a magnetic polarity opposite to a magnetic polarity of another of said plurality of shaping coils because poles 1 and 2 are taught to be of opposite polarity, therefore half of the shielding components 5, which shield main coils by constraining/opposing the current of the driving coils have a first polarity and the other half have the opposite polarity. [See col. 2 line 30 through col. 3 line 6]. The same reasons for rejection, that apply to **claims 1, 2, 7, 14, 15** also apply to **claim 16** and need not be reiterated.

25. With respect to **Amended Claim 17**, the **Bryne et al.,** reference shows from figures 1 and 2, a magnetic resonance imaging (MRI) apparatus for imaging a volume:, [See figures 1 and 2 the abstract, and imaging volume 3] comprising "at least one main

coil", (i.e. components 1a, 1b of figures 1 and 2) "configured to generate a magnetic field;" [See col. 3 lines 7-42; col. 2 lines 30 through col. 3 line 6] "at least one bucking coil" (i.e. components 1e, 1f, 2e, 2f of figure 1 are interpreted broadly as bucking coils because of their functional purpose) "**disposed axially outside said at least one main coil with respect to said volume**" [See figure 1] "**and** configured to shield said at least one main coil;" [See col. 3 lines 7-53 the main coil components are coils 1a and 2a in figure 1] "a plurality of shaping coils to shape said magnetic field in said volume" (i.e. shielding/shaping components 5 shown in figures 1, 2; col. 2 line 39 through col. 3 line 6; col. 3 lines 29-53] "and a plurality of ferromagnetic rings" (i.e. iron ring components 1b, 1c, 2b, 2c of figure 2) [See col. 3 lines 7-42] "for shielding interactions between coils of opposite polarity, at least one of said plurality of ferromagnetic rings being positioned between said at least one main coil and said at least one bucking coil' [See figures 1 and 2 in combination and the teachings of col. 3 lines 7-42]. The rejections of **claims 1, 7, 10, 11, 14, 15, 16;** Figures 1 through 15}. The same reasons for rejection, that apply to **claims 1, 2, 7, 10, 14, 15, 16** also apply to **claim 17** and need not be reiterated.

26. With respect to **Claim 18**, **Bryne et al.,** reference shows "a single unit support structure" [See figures1-2, the single "C" shaped support structure, col. 1 line 36 through col. 3 line 53] "for supporting said at least one main coil, (i.e. components 1a, 2a, of figures 1,2) "said at least one bucking coil" " (i.e. components 1e, 1f, 2e, 2f of figure 1 are interpreted broadly as bucking coils because of their functional purpose) "said plurality of shaping coils", (i.e. shielding/shaping component 5 of figures 1 and 2) "and said plurality of ferromagnetic rings" (i.e. iron ring components 1b, 1c, 2b, 2c of figure 2) [See col. 2 line 30 through col. 3 line 53 lines] The same reasons for rejection, that apply to **claims 1, 2, 7, 10, 14, 15, 16, 17** also apply to **claim 18** and need not be reiterated.

27. With respect to **Claim 19**, the **Bryne et al.,** reference shows and teaches from the **earlier rejections of claims 1, 2, 3**, which need not be reiterated that "said single unit support structure comprises: a substantially cylindrical shell; a hub positioned along a substantially central axis of said cylindrical shell', and a plurality of gussets positioned within said cylindrical shell, each of said gussets extending radially outward from said

hub." {See figures 1-2; col. 1 line 36 through col. 3 line 53; and the abstract.] The same reasons for rejection, that apply to **claims 1, 2, 3, 7, 10, 14, 15, 16, 17, 18** also apply to **claim 19** and need not be reiterated.

28. With respect to **Amended Claim 20, Bryne et al.,** teaches and shows "A magnetic resonance imaging (MRI) apparatus for imaging a volume", [See figures 1-2, abstract] "comprising: means for generating a magnetic field for imaging said volume" [See upper magnetic pole 1, lower magnetic pole 2, and electromagnetic coils 1a, 2a of figures 1 and 2] **Bryne et al.,** also teaches and shows a "means for shielding said means for generating" [See col. 3 lines 7-23 col. 2 lines 39 through col. 3 line 6; shielding component 5] ; "and means for shaping said magnetic field" [See figure 2 the component numbers identified as components 2b, 2c, 1b, 1c which also effectively shape the magnetic field as per col. 3 lines 7-42] In figure 2 the examiner notes that these components and are shown "positioned radially inside the said means for producing the magnetic field" [See figure 2 components 1a,2a] **and axially further from said volume**" (i.e. imaging volume 3 in figures 1 and 2) "**than said means for generating the magnetic field or in a plane of said means for generating the magnetic field**." [See figures 1 and 2 col. 2 line 39 through col. 3 line 53; iron shaping rings 1b, 1c, 2b, 2c.]

29. With respect to **Claim 21, Bryne et al.,** shows in figures 1-2, a "means for supporting" (i.e. via the supporting structures shown [See col. 1 line 36 through col. 2 line 9) "said means for generating" [See upper magnetic pole 1, lower magnetic pole 22, and electromagnetic coils 1a, 2a, of figures 1, 2] "said means for shielding" [See components 5 col. 2 line 39 through col. 3 line 53 and figures 1 and 2]; "and said means for shaping". [See col. 2 line 39 through col. 3 line 53 figures 1 and 2 the component numbers identified as components 2b, 2c, 1b, 1c] The same reasons for rejection, that apply to **claim 20** also apply to **claim 21** and need not be reiterated.

30. With respect to **Claim 22, Bryne et al.,** teaches and shows a "means for shielding interactions between coils of opposite polarity." [See col. 3 lines 7-23 figures 1 and 2]. The same reasons for rejection, that apply to **claim 20** also apply to **claim 22** and need not be reiterated.

31. With respect to **Amended Claim 23, Bryne et al.,** teaches and shows "An open magnetic resonance imaging (MRI) device" [See figures 1-2, col. 1 lines 39 through col. 3 line 53; abstract] **Bryne et al.,** teaches and shows, that the device comprises "**first and second** ~~at least one~~ main coil**s**" (i.e. electromagnetic coils 1a and 2a of figures 1 and 2) "for generating a magnetic field for imaging a volume" [See col. 1 line 30 through col. 3 line 53] **Bryne et al.,** also teaches and shows "**first and second sets of** ~~at least one~~ shaping coil**s**", [See figures 1 and 2; components 1b, 1c,and 2b, 2c and component 5]. The examiner notes that in this independent claim that the iron ring components 1b, 1c,and 2b, 2c as well as component 5 which shields and shapes the magnetic homogeneity also satisfy the remaining limitation because components 1b, 1c, 2b, and 2c are shown in figure 2 to be] "**positioned adjacent to each of said first and second main coils,** (i.e. components 1a, 2a) **respectively, each set of** ~~said at least one~~ shaping coil**s**" (i.e. 1b, 1c; or 2b, 2c) being positioned radially within the ~~said at least one~~ main coil" [See figure 2] **and axially further from said volume**" (i.e. imaging volume 3 in figures 1 and 2) "**than said respective main coil**"(i.e. components 1a, 2a) **"or in a plane of said respective main coil** to shape said magnetic field in said volume". [See col. 1 line 36 through col. 3 line 53 figures 1, 2, and the abstract; especially col. 3 lines 7-42.].

Claim Rejections - 35 USC § 103

32. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

33. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

34. **Claims 12, 14** are rejected under **35 U.S.C. 103(a)** as being unpatentable over **Chari et al.**, US patent 5,307,039 issued April 26th 1994.

35. With respect to **Claims 12**, and **claim 14, Chari et al.**, lacks directly teaching or showing that there are "at least eight shaping coils" (i.e. **claim 12**). Or that "the number of shaping coil is even" (i.e. **claim 14**). However, **Chari et al.**, teaches that the present invention is not limited specifically to five coils and that any suitable combination which would produce sufficient field strength and homogeneity could be used. [See col. 3 lines 12-21] Therefore, It would have been obvious to one of ordinary skill in the art at the time that the invention was made, that the **Chari et al.**, reference teaches modifying the number of coils used for shaping the main magnetic field and that a combination of eight coils, (i.e. **claim 12**), or an even number of coils (i.e. **claim 14**) is suggested by the teaching of "any suitable combination" of coils larger or smaller than the five coils taught and shown "which would produce sufficient field strength and homogeneity", falls within the scope of the **Chari et al.**, reference. The same reasons for rejection, that apply to **claim 1,** also apply to **claims 12** and **14** and need not be reiterated.

36. The **prior art made of record** and not relied upon is considered pertinent to applicant's disclosure.

A) **Cheng et al.,** US Patent Application publication 2003/0001575 A1 published January 2nd 2003, filed January 19th 2001.

B) **Cheng et al.,** PCT international publication WO 01/53847 A1 published 26 July 2001, filed January 19th 2001.

C) **Danby** US patent 6,201,394 B1 published March 13th 2001, filed November 21st 1997.

D) **Dorri et al.,** US patent 5,565, 831 issued October 15th 1996; This reference teaches a structure similar to **Bryne et al.,** in a non-"C" configuration but fails to show the presence of "gussets". It is pertinent to all claims but the applied prior art above is considered to be the most relevant.

E) **Pulyer** US patent 5,378,988 issued January 3rd 1995.

F) **Ries** US patent 5,347,252 issued September 13th 1994. See entire reference.

G) **Huson et al., US patent 5,315,276 issued May 24th 1994** This reference teaches a structure similar to **Bryne et al.,** but fails to show the presence of "gussets". It is pertinent to all claims but the applied prior art above is considered to be the most relevant.

H) **Westphal et al.,** US patent 5,485,088 issued January 16th 1996. [See entire reference.]

I) **Ohashi et al.,** US patent 5,864,275 issued January 26th 1999. [See entire reference.]

J) **Ohashi et al.,** US patent 5,963,117 issued October 5th 1999. [See entire reference.]

K) **Minas et al.**, US patent 6,717,408 B2 issued April 6th 2004,; filed April 5th 2001. [See entire reference.]

L) **Minas et al.**, US patent application publication 2002/0145426 A1 published October 10th 2002; filed April 5th 2001. [See entire reference.]

M) **Laskaris et al.**, US patent application publication 2004/0100261 A1 published May 27th 2004; filed November 25th 2002. The examiner notes that this reference is the pre-grant publication of applicant's instant application, which is noted for the purposes of a complete record only, and is not available as prior art against the pending claims.

37. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

38. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

39. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tiffany Fetzner whose telephone number is: (571) 272-2241. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm., and on alternate Friday's from 7:00am to 3:30pm.

40. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez, can be reached at (571) 272-2245. The only official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

TAF
January 9, 2005

Diego Gutierrez
Supervisory Patent Examiner
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